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ICHTHYOLOGY.—*A new name for* Synchiropus altivelis *Regan, with a key to the genera of the fish family Callionymidae.*[1]

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During the course of our study of the fishes of the northern Marshall Islands it was necessary to review the genera of callionymid fishes of the world. We observed that *Synchiropus altivelis* Regan [Trans. Linn. Soc. London **12**: 249, pl. 30, fig. 1. 1908 (Seychelles); Norman, John Murray Exped. 1933–34, Sci. Repts. Fishes, **7** (1): 75, fig. 27. 1939 (Gulf of Aden)] is preoccupied by *Callionymus altivelis* Temminck and Schlegel [Fauna Japonica, p. 155, pl. 79, fig. 1. 1845 (Japan)], now *Synchiropus altivelis* (T. and S.). We herewith propose the new name *Synchiropus normani* to replace *S. altivelis* Regan, 1908.

Although Fowler (Proc. U. S. Nat. Mus. **90**: 1–2. 1941) gave a key to the genera, new facts have been found that require us to present our different analysis, with synonyms of genera. The species of this family have not been revised, and they are in a general state of confusion, somewhat as a result of the differences between sexes. We do not have the time or the specimens necessary to revise carefully the several dozen species named but believe our analysis of genera will aid in referring most or all of the species to a defined genus. We have examined the 54 lots of types and paratypes of this family along with numerous other nontype specimens in the National Museum. That material forms the basis of the following key:

Key to the Genera of Callionymidae

1*a*. Two dorsal fins.

2*a*. No pelvic ray free or separate from others, all connected by membrane.

3*a*. Two lateral lines, lower one represented by a fleshy keel or membranous fold along lower side of body beginning opposite anterior base of anal fin; opercular membrane ending in a free flap; posterior part of maxillary semitubular in form, convex side inward, open side outward, with a very short anterior and outwardly projecting concave lobe, scarcely developed in small specimens; opercular opening superior in position, above opercle, in form of a small foramen; pelvic fins connected to pectoral base by a membrane attached opposite base of 4 to 6 pectoral rays from dorsal edge of fin; upper lateral line simple; no orbital tentacle; preopercular spine acute with small spines dorsally and a small antrorse spine basally; soft dorsal and anal rays all unbranched except last one in each fin which is branched to base..... *Calymmichthys*[2] Jordan and Thompson

3*b*. A single lateral line located mostly in dorsal part of body, no thin fold of skin along lower side.

4*a*. An orbital tentacle in combination with a broad somewhat fleshy lower lip folded under chin; opercular opening a small foramen above opercle; no free opercular flap; pelvic membrane attached to base of pectoral fin; lateral line simple; preopercular spine acute with spiny points dorsally and an antrorse spine ventrally and somewhat basally; all rays of soft dorsal and anal fins un-

[1] Published by permission of the Secretary of the Smithsonian Institution. Received August 13, 1948.

[2] *Calymmichthys* Jordan and Thompson, Mem. Carnegie Mus. **6**(4): 296, pl. 36, fig. 2. 1914 (genotype, *C. xenicus* Jordan and Thompson). Their figure lacks the lower lateral line described twice in the text.

Diacallionymus Fowler, Proc. U. S. Nat. Mus. **90**: 29. 1941 (genotype, *Callionymus goramensis* Bleeker).

Dermosteira Schultz, U. S. Nat. Mus. Bull. 180: 267, fig. 26. 1943 (genotype, *D. dorotheae* Schultz); We believe *C. cookei* Günther belongs in this genus.

branched except last one in both fins branched to its base . . . *Amora*[3] Gray

4*b*. No orbital tentacle, or if a small one occurs the lower lip not broadly folded below chin.

5*a*. Pelvic fin membrane absent, no membrane connecting pelvic fin with pectoral base; preopercular spine without a basal antrorse spine.

5*b*. Pelvic membrane present and joined with base of pectoral fin near its middle; no free opercular flap; gill opening a small foramen above opercle; lateral line simple; no orbital tentacle.

6*a*. Opercle ending in a free dermal flap; gill opening in a superior position at rear of opercle; lateral line without elongate side branchings; body very robust; all rays of soft dorsal and of anal unbranched except last one, which is branched to base in both fins . . . . . *Eleutherochir*[4] Bleeker

6*b*. No free opercular flap of skin; gill opening superior in position, above opercle; all rays of anal unbranched except last, which is branched to its base.

7*a*. Lateral line with short branches at right angles; all rays of soft dorsal unbranched except last, which is branched to its base . . . . . *Paracallionymus*[5] Barnard

7*b*. Lateral line simple; soft dorsal rays branched and last one to its base . . . . *Yerutius*[6] Whitley

8*a*. Preopercular spine with a basal antrorse spine or one near its ventral edge; all rays of dorsal and of anal fins unbranched except the last one in both fins which is branched to its base . . . . . *Callionymus*[7] Linnaeus

8*b*. No antrorse spine at base or on ventral side of preopercular spine; first soft dorsal ray usually unbranched, all rest branched (except in young), the last one to its base; anal rays unbranched except last one, which is branched to its base . . . . . *Synchiropus*[8] Gill

2*b*. First pelvic ray not connected by a membrane with the next ray; gill opening behind opercle . . . . . *Dactylophus*[9] Gill

1*b*. Dorsal fin single, spiny part lacking; gill opening superior in position at rear of opercle; pelvic membrane not connected with pectoral base; lateral line simple; orbital tentacle lacking; no antrorse spine near basal part of preopercular spine; soft dorsal rays branched, last one to its base; anal rays unbranched, except last one, which is branched to its base . . . . . *Draculo*[10] *Snyder*

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[3] *Amora* Gray, Illustrations of Indian zoology, Hardwicke, **2**: pl. 90, fig. 1. 1833–34 (genotype, *Amora tentaculata* Gray = *Anaora* Gray, *ibid.*, probably typographical error for *Amora* in directions for arranging plates). (Reference copied.) We refer *Synchiropus tentaculatus* Herre (Philippine Journ. Sci. **35**: 33, pl. 3. 1928) as a synonym of *Amora tentaculatus* Gray. *S. tentaculatus* Herre is a homonym also, but since we do not consider it as distinct from *tentaculatus* Gray, we see no reason to propose a new substitute name. In addition *Callionymus fimbriatus* Herre (Herre Philippine Exped. 1931: 94. 1934) is a synonym of both *tentaculatus* Gray and *tentaculatus* Herre, in our opinion.

[4] *Eleutherochir* Bleeker, Versl. Medel. Akad. Wet. Amsterdam, ser. 2, **14**: 103. 1879 (genotype, *C. opercularioides* Bleeker).

Brachycallionymus Herre and Myers, *in* Herre, Proc. Biol. Soc. Washington **49**: 12. 1936 (genotype, *B. mirus* Herre = *C. opercularioides* Bleeker).

[5] *Paracallionymus* Barnard, Ann. Mag. Nat. Hist., ser. 9, **20**: 69. 1927, and Ann. South African Mus. **21**: 448. 1927 (genotype, *C. costatus* Boulenger).

[6] *Yerutius* Whitley, Rec. Austral. Mus. **18**: 115. 1931 (genotype, *C. apricus* McCulloch).

[7] *Callionymus* Linnaeus, Systema Naturae, ed. 10: 249. 1758 (genotype, *C. lyra* Linnaeus).

Calliurichthys Jordan and Fowler, Proc. U. S. Nat. Mus. **25**: 941. 1903 (genotype, *C. japonicus* Houttuyn).

Repomucenus Whitley, Austr. Zool. **6**: 323. 1931 (genotype, *C. calcaratus* Macleay).

Callimucenus Whitley, Suppl. checklist fishes New South Wales, ed. 3, no. 398: 418. 1934 (genotype, *C. macdonaldi* Ogilby).

Velesionymus Whitley, *ibid.*: 418 (genotype, *C. limiceps* Ogilby).

[8] *Synchiropus* Gill, Proc. Acad. Nat. Sci. Philadelphia, 1859: 129. 1860 (genotype, *C. lateralis* Richardson).

Foetorepus Whitley, Austr. Zool. **6**: 323. 1931 (genotype, *C. calauropomus* Richardson).

[9] *Dactylophus* Gill, Proc. Acad. Nat. Sci. Philadelphia 1859: 130. 1860 (genotype, *C. dactylophus* Bennett = *D. bennetti* Gill).

Vulsus Günther, Catalogue of the fishes in the British Museum **3**: 15. 1861 (genotype, *C. dactylophus* Bennett).

[10] *Draculo* Snyder, Proc. U. S. Nat. Mus. **40**: 545. 1911 (genotype, *Draculo mirabilis* Snyder).